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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,134	08/29/2003	Philip E. May	CML00770D	1156
33117	7590	07/24/2006	EXAMINER	
LEVEQUE INTELLECTUAL PROPERTY LAW, P.C. 221 EAST CHURCH ST. FREDERICK, MD 21701				PAN, DANIEL H
ART UNIT		PAPER NUMBER		
		2183		

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/652,134	MAY ET AL.
	Examiner	Art Unit
	Daniel Pan	2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 May 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 May 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/01/06,05/03/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

1. Claims 1-13 remain for examination.

35 U.S.C. 101 reads as follows'.

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1,6, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The reasons are given below .

3. As to newly amended claim 1, although applicant added the production of a computer readable medium containing a compressed sequence of multiple –instruction control words, neither the claim nor the specification clearly defines the "computer readable medium", therefore, the computer readable medium is read as a computer readable medium in general and is given the broadest interpretation, such as dataflow graphs not necessarily in hardware. The evidence shows that applicant is directing the data flow graphs instead of the hardware component equivalents (see page 9, lines 19-20). Therefore, no physical transformation can be found in the claims. No substantial practical application can be found in the claim. Although clam recites storage of the modified sequence of multiple –instruction words, it is not sure what has been accomplished. Therefore, no substantial practical application can be found. It is not tangible because data flow graphs are abstract. It is not concrete because the result of storing the modified sequence of instruction words is unpredictable.

4. As to newly amended claim 6, although claim 6 additionally recites the processor executing the decompressed control word, the final result of executing decompressed word is unclear. Therefore no substantial practical application can be found. The focus is not on the steps of features taken to achieve the final result which is useful, tangible and concrete, but rather the final result achieved which is useful, tangible and concrete (see page 20 of 101 Interim Guidelines at uspto.gov). The processor executing the decompressed word is a step taken to achieve the final result, not the final result itself. Therefore, claim is directed to non-statutory subject matter.

5. Claims 1 , 4, 5, 6,8,9,10,11,12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (5,893,143).

6. As to the newly amended feature of computer readable media, Tanaka also included a computer readable media (see fig.5 [memory][cache]).

7. As to newly amended claim 5, Tanaka also included ordered field (see fig.6).

8. As to the newly amended execution of the compressed word , see the execution of the compressed word in col.3, lines 12-28, see also the compressed instruction format in col.7, lines 15-65).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (5,893,143) in view of Mehrotra et al. (6,571,016).

10. Claim 3, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tanaka (5,893,143) in view of Pechanek et al. (6,173,389) .

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (5,893,143) in view of Shebanow et al. (5,367,494) .

12. The rejections are maintained and incorporated by reference the last office action on 02/06/06.

13. The response field on 05/03/06 has been fully considered but is not persuasive.

In the remarks, applicant argued that :

- a) none of the field a,b,c,d in the element 700 of fig.6 contains NOPs in each of the words 0-4;
- b) Tanaka did not teach remove the set of aligned fields;
- c) claim 6 calls for reconstructing the uncompressed control word by inserting nop;
- d) Tanaka's mask information 410 was to control the selectors 120, not the processing unit 110;
- e) Tanaka 's mask identified the fields where compressed instruction should be placed, no aligned fields was removed;
- f) Tanaka did not teach pipelined permute unit;
- g) Claim 12 calls for the compression mask to be used to disable processing elements of the plurality of processing elements that are unused by the sequence of multiple-instruction control words;
- h) compression may be performed in a very different manner to the decompression;
- i) rearrangement of claim VLIWs is not required for claim 3, since the fields remain aligned in the compressed instructions;

- j) claim 13 resulted in less complex decompression circuitry;
- k) all banks must be enabled because the number of fields in the compressed control word 701 is the same as the number of the slices in the uncompressed control words;
- l) caches are not equivalent to memory banks;

14. As to a) Tanaka did have nop in each word (see each row in 700 in fig.6).
15. As to b), Tanaka did teach remove the set of aligned fields (see the number of the fields in third row was reduced to 3 in fig.6 [710]).
16. As to c) above, Tanaka did insert the nop in into the compressed word (see fig.6 [1100]). Whether it was the third instruction word or the second instruction word is irrelevant because the mask bit could be adjusted to refer specific position other words.
17. As to d) , the selectors 120 were the functional ports of the processing units 110 (see fig.12).
18. As to e), Tanaka did teach remove the set of aligned fields (see the number of the fields in third row was reduced to 3 in fig.6 [710]).
19. As to f), Tanaka did teach pipelined permute unit (see the decompression inserted into the pipeline for execution in col.3, lines 6-13);
20. As to g), Tanaka taught the mask as the identifier in fig.11 for selecting the clusters. The nonelected clusters were disabled processing elements of the plurality of processing elements that are unused.

21. As to h), examiner holds that one of ordinary skill in the art should be able to recognize both compression and decompression, though performed in a very different manner , are closely related.
22. As to i), Tanaka's fields remain aligned in the compressed instructions (see fig.6, 710);
23. As to j), no less complex decompression circuitry can be found in the claim.
24. As to k), the number of fields in the compressed control word 701 is not the same as the number of the slices in the uncompressed control words (see fig.6);
25. As to l), applicant is reminded that unclaimed features cannot be used to overcome the prior art (e.g. see CCPA In re Lundenberg & Zuschlag, 113, USPQ 530, 534 (1957)). For example, nowhere does applicant claim recite that caches are not equivalent to the memory banks.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

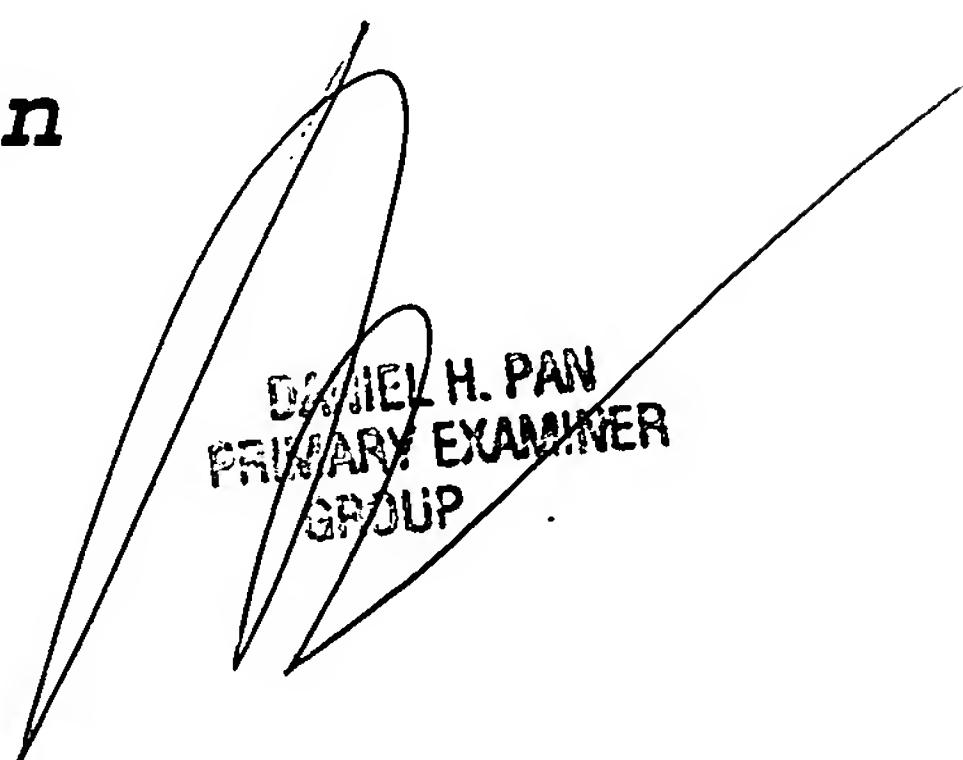
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan



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